



YOSEMITE NATIONAL PARK

“When we try to pick out anything by itself, we find it hitched to everything else in the universe.”

— John Muir, *My First Summer in the Sierra*, 1869

PLANNING UPDATE

Volume 20

June 2001

“Rumors abound, but the goals and actions outlined in the Yosemite Valley Plan have been approved, not ‘killed.’”

Dear Yosemite Friends,

OVER THE LAST SEVERAL WEEKS, many people have approached me with rumors that the *Yosemite Valley Plan* is “dead.” One park employee returning from vacation was asked on the airplane how Yosemite was faring “now that all of the roads into the park are closed.” I want to assure you that nothing could be further from the truth. Rumors abound, but the goals and actions outlined in the *Yosemite Valley Plan* have been approved, not “killed.”

This issue of the *Planning Update* will bring you timely information on the latest efforts occurring in the park. Two actions identified in the *Yosemite Valley Plan* include the removal of the Cascades Diversion Dam on the Merced River and the removal of the condemned pedestrian bridge near Happy Isles. Environmental analyses on these two projects will be completed over the summer and, pending approval, work could begin in late fall.



In March, we opened the scoping process to revise the park’s *Fire Management Plan* and its *Environmental Impact Statement*. This important plan will help set future direction for management of prescribed burns, hazardous fuel reduction techniques, and protection of developed areas and private property within the park. Fire is one of the most important ecological processes and tools available to land managers throughout the Sierra Nevada. In order to be able to use fire as a tool for preserving both natural and cultural resources, we must complete the *Fire Management Plan*.

I encourage you to stay interested, stay informed, and stay involved in Yosemite’s future. It is very much alive!

Sincerely,

David A. Mihalic
Park Superintendent

What is a Wild and Scenic River?

IN THE 1960s, the United States came to recognize that many of the nation's rivers were being dredged, dammed, diverted, and degraded at an alarming rate. In response, Congress established the Wild and Scenic Rivers Act in October 1968. A Wild and Scenic River is one designated by Congress as having unique or "outstandingly remarkable values" that set it apart from all other rivers, making it worthy of special protection. The goal of designating a river as Wild and Scenic is to preserve its free-flowing character and unique qualities.

In 1987, Congress designated the Merced Wild and Scenic River which grants this protection to the river and its immediate environment.



NPS Photo by Howard Weamer

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Planning Begins for Removal Projects

In early April, the National Park Service initiated planning for two separate demolition projects that were called for in the *Yosemite Valley Plan*: the removal of the Cascades Diversion Dam in Yosemite Valley's west end, and the removal of the condemned Happy Isles Gauging Station Bridge at the east end. In preparation for an Environmental Assessment on each project, public comments were sought in order to formulate alternatives. On April 18, over 60 members of the public participated in on-site visits to the two project locations. Also attending were the hydrologists, biologists, and engineers overseeing the demolition efforts.

The Environmental Assessments are anticipated for release in July, at which time, a 30-day public review period will begin. 

Cascades Diversion Dam Removal

In the early part of the twentieth century, National Park Service Director Stephen T. Mather envisioned a "new Yosemite" where modern comforts of hot water, restaurants, and electricity could be experienced "to meet the ever-increasing demand for every type of experience." In 1917, park visitation reached a total of 34,510. This increased visitation meant a greater demand for providing those modern comforts, which ultimately led to the 1918 completion of the Cascades Diversion Dam and Hydroelectric Powerhouse.

In August 1985—after 67 years—generation of electricity at the powerhouse was halted. Today, the dam serves no useful function. The Bureau of Reclamation in its "Safety of Dams" inspection program noted serious deficiencies in the structure and required the park to either repair or remove it. Since the dam is an unwanted obstruction to the Merced Wild and Scenic River, park management is anticipating removal of the dam in order to restore the river's natural free-flowing condition.

The dam is located on the main stem of the Merced Wild and Scenic River, at the far west end of Yosemite Valley. It consists of "cribs" formed by square timbers spiked together. These cribs were then filled with boulders and rocks and were anchored some 18 feet below the crest of the dam. The cribs were sheathed with rough-hewn redwood boards, which are visible during periods of low water. The dam is 184 feet across with a crest height of about 17 feet. It is flanked by 30-foot high concrete abutments. It currently impounds an area of approximately 2.5 acres, along with an estimated 15,000 to 20,000 cubic yards of accumulated sediment.



NPS Photo by Matt Trask

Cascades Diversion Dam

These exposed and damaged redwood boards along the top of the Cascades Diversion Dam are visible during much of the year.

WHY REMOVE THE DAM?

The dam is in a deteriorated condition, which was exacerbated by structural damage caused in the 1997 flood. In this weakened state, it has the potential for uncontrolled collapse, which presents a public health and safety hazard, as well as a hazard to the river environment. Removal of the dam will be preferable to cleaning up the residue washed miles downstream after the next flood. Additionally, during periods of average to low water flow, the dilapidated wooden structure of the dam is exposed, creating a visual intrusion on an otherwise popular scenic location.

REMOVAL CONCERNS AND POSSIBLE STRATEGIES

Concerns raised by the public include the potential impacts caused by the flush of stored sediments. Also of concern is the potential for increased erosion of the road embankment adjacent to the pond above the dam when free-flowing conditions are restored. Hydrologists involved in the project have posed the following questions: Will the stored sediment erode quickly or remain in place for a long time? Will turbidity in the river downstream of the dam rise to unacceptable levels? How far would sediments travel? Would there be an impact on the downstream fishery? If these impacts are predicted to be unacceptable, it makes sense to remove or stabilize the sediment. If, on the other hand, the impacts are not thought to be great, it would be much less costly to allow the river to erode the impounded sediment and transport it downstream.

A range of alternatives will be presented in the Environmental Assessment for the project. The No Action Alternative will constitute an approach of benign neglect, allowing the dam to deteriorate over time. As proposed by hydrologists, one possible strategy may allow the accumulated sediments to remain in place after removal of the dam, leaving sediments to erode gradually. Another approach may call for the partial removal of sediments from the channel. 

In 1917, park visitation reached a total of 34,510. This increased visitation meant a greater demand for providing modern comforts, which ultimately led to the 1918 completion of the Cascades Diversion Dam and Hydroelectric Powerhouse.

Dam Removal Timeline

THE DAM REMOVAL will eliminate a safety hazard and negative impacts to the free-flowing character of the Merced River. Demolition will need to be performed during the low water months of September, October, and November. Pending approval of the project, demolition is expected to begin in late fall of 2001.



NPS Photo by Matt Trask

Implications of Dam Removal

Removal of the Cascades Diversion Dam would allow for changing the Merced Wild and Scenic River's classification from "recreational" (having had some diversion or impoundment) to "scenic" (free of impoundments).

Why is Free Flow Important to a River System?

- Free-flowing rivers disperse valuable nutrients in adjacent meadows and stream habitats during flood events.
- Aquatic species require varied habitat created by a dynamic river system.
- Constriction and hardening of river channels, as caused by levees, riprap, and bridges, can alter the river's energy and natural course, causing it to erode its banks and damage valuable habitat, particularly during flood events.



Photo by Jack Gyer

Happy Isles Gauging Station Bridge Removal

The Happy Isles Gauging Station Bridge is a cast-in-place concrete structure which spans the Merced Wild and Scenic River in Yosemite Valley's east end. Located near the Nature Center at Happy Isles, this pedestrian bridge crosses the river at the location of one of the Sierra Nevada's most prominent trailheads—the 211-mile John Muir Trail.

The Happy Isles Stream Gauge, operated by the U.S. Geological Survey, is located adjacent to the bridge along the east side of the river. This gauge has been in operation since 1915 and has provided the longest continuous record of stream flow data available anywhere in California.

WHY REMOVE THE BRIDGE?

The Happy Isles Gauging Station Bridge (not one of the Valley's stone veneer bridges) was badly damaged during the 1997 flood. It was deemed unsafe for pedestrian use by representatives of the Federal Highways Administration and condemned in July 1997. Since that time, the closed bridge has continued to deteriorate and is showing signs of imminent failure. A continually expanding sinkhole is appearing on the west abutment, and this loss of support is causing the structure to "hang" from the west wingwalls. The west abutment area is also cracking and crumbling, indicating severe failure. It is not structurally possible to repair the bridge due to the extent of damage.

Because of the threat to public health and safety, the National Park Service proposes to remove the bridge before it collapses on its own. The east abutment would be retained in order to protect the stream flow gauge.



NPS Photo

Built in 1921. Closed since 1997.

The crumbling concrete of the Happy Isles Gauging Station Bridge's western abutment is a clear indication of imminent failure.

KEY CONCERNS

If the bridge is not removed, the risk of it collapsing remains great. If this were to occur, concrete and metal would be dumped into the Wild and Scenic River, creating an unnatural dam in the river, and causing uncontrolled erosion to both banks. This is similar to what happened during the 1997 flood: natural debris built up against on the bridge itself, causing floodwaters to flow around the abutments, and cut into the streambanks on either side. Collapse could also endanger Yosemite Valley's main water supply line which runs parallel to the river along the western bank under the paved pedestrian path and adjacent to the abutment.



Photo by Mary V. Hood

North Dome, View from the Bridge

Although not included as part of this bridge removal project, a replacement footbridge is expected to be constructed some time in the future as identified in the *Yosemite Valley Plan*.

POSSIBLE STRATEGIES FOR BRIDGE REMOVAL

A range of alternatives will be presented in the Environmental Assessment for this project. The No Action Alternative may consist of an approach of benign neglect, allowing the bridge to deteriorate over time. (However, it is acknowledged that this would pose an environmental hazard.) One possible deconstruction method may call for a “dry-dismantle” of parts of the bridge, involving blasting and catching materials in the river with a net system or floating barge. A “wet-dismantle” approach might involve operating a crane or excavator from the bank of the river; debris would then be allowed to fall into the river. A combination of a wet and dry dismantle may also be used.



Stay Involved

THE ENVIRONMENTAL ASSESSMENTS for the dam and bridge removal projects are expected to be released for public comment in July. To receive a copy, return the mailback section on the back of this *Planning Update*. You can also review the Environmental Assessments on the park's planning web site (www.nps.gov/yose/planning/demo).

Bridge Removal Timeline

THE REMOVAL of the Happy Isles Gauging Station Bridge will eliminate an immediate safety and environmental hazard while protecting the operational stream flow gauge. Demolition will need to be performed during the low water months of September, October, and November. Pending the approval of the project, demolition is anticipated to begin in late fall of 2001.



NPS Photo

East Bank of the River

The historic gauge is managed as a benchmark station and acts as an early warning system for floods in Yosemite Valley. Currently, data is transmitted once per hour to a satellite where it is immediately available on the Internet and is downloaded weekly for U.S. Geological Survey records.

Fire Management Plan

Yosemite National Park is currently developing a draft environmental impact statement to revise its *Fire Management Plan* (completed in 1990). On April 10, more than fifty people participated in a public scoping meeting in Yosemite Valley. Participants were asked to consider any issues, opportunities, and concerns that would facilitate the development of alternatives for the revised *Fire Management Plan* and *Environmental Impact Statement*. Specifically, public comment was sought addressing the following major issues:

- **Alternatives to Burning** — Use of mechanical methods, chipping, firewood sales, and even machinery in non-wilderness developed areas may be necessary to reduce buildup of underbrush and dead or downed wood. This would result in providing greater protection to homes or communities potentially threatened by wildland fires.
- **Ecosystem Restoration** — Fire would be used as a natural management tool, regardless of how a fire is started. Fires would be managed for protection of life, property, and cultural and natural resources.
- **Regional Air Quality** — With more agencies conducting prescribed burns and managing fire use, regional air quality will be a concern. Over the long term, prescribed fires and wildland fire use could reduce the health impacts from unwanted fires—which produce the most intense smoke each fire season.

The National Park Service has collected all scoping comments (the period ended April 30) and is in the process of reading them and writing alternatives. A *Draft Fire Management Plan/Environmental Impact Statement* is scheduled to be released in late summer of this year, at which time another comment period will begin. All interested parties will be invited to submit comments about the range of alternatives presented in the plan.

Fire as a Tool

PARK MANAGERS RECOGNIZE fire as an essential part of the ecosystem. Two tools used to help restore this natural process include prescribed fire and wildland fire use.

Prescribed fires (like this 1992 fire in Cook's Meadow) are ignited under approved conditions by qualified staff. Since 1970, Yosemite has safely conducted 191 prescribed fires.

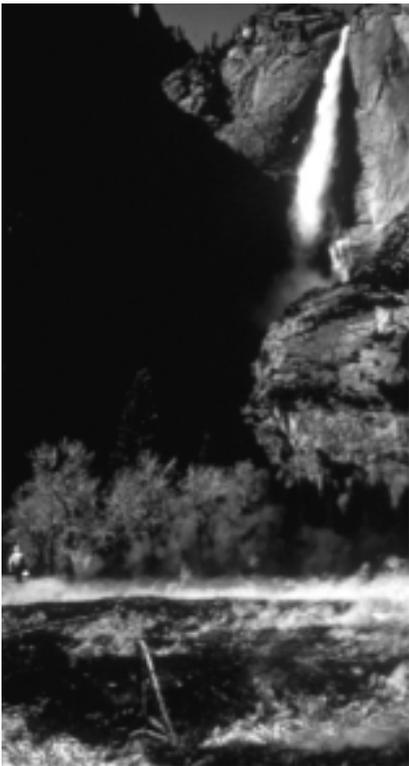
Wildland fire use is any naturally ignited fire (e.g., a lightning strike) that is allowed to burn in order to reduce the buildup of debris on the forest floor.



Photo by Bruce Berry

Protecting Property and Park Resources

Prescribed burns, wildland fire use, and mechanical clearing can help reduce the risks associated with unnatural buildup of underbrush and dead or downed trees.



NPS Photo

WHY REVISE THE FIRE MANAGEMENT PLAN?

Fire management in Yosemite National Park has been a fully operational program for many years. Planning and programs were put in place soon after 1968, the year the National Park Service changed its policy from suppressing fires to allowing natural processes to prevail. The fire management program consists of management strategies based on knowledge gained from research and monitoring, and from experience gained by managing prescribed burns and wildland fires. Refinements in the program need to be made as knowledge of fire ecology increases.

Updated fire management plans are also needed to respond to the requirements of the 2001 Federal Fire Policy and the National Park Service fire management policy. The *Draft Yosemite Fire Management Plan/Environmental Impact Statement* will present alternatives that will implement national fire policy in Yosemite National Park and the El Portal Administrative Site. At the same time, it will also propose adjustments in the fire management strategy to better accomplish resource management goals, protect the wildland-urban interface (developed areas within the park), and provide for improved public and firefighter safety.

KEY CONCERNS

Unnatural buildup of underbrush and dead or downed trees has increased the risk that large, catastrophic fires will destroy vegetation communities, structures, and cultural landscapes. It is the park's goal to protect natural and cultural resources, and the homes and businesses adjacent to park lands from unwanted wildland fires. The park also aims to use methods for fuel reduction that will accomplish the park's resource protection goals.

In many areas of the park, vegetation communities and ecosystem processes have been altered due to fire suppression in the past. These need to be restored so that Yosemite continues to display the wide variety of vegetation communities and habitats for which it is renowned. At the same time, threatened, endangered, and other species of concern need to be protected.

WHEN WILL THE FIRE MANAGEMENT PLAN BE IMPLEMENTED?

The *Draft Yosemite Fire Management Plan/Environmental Impact Statement* is expected to be released in late summer of 2001. Following the public comment period, a *Final Fire Management Plan/Environmental Impact Statement* will be prepared and distributed to the public. At the conclusion of a 30-day no-action period, the National Park Service will prepare a Record of Decision. Once approved and signed, any changes that are made to Yosemite National Park's fire management program will be implemented. A summary document, the *Yosemite Fire Management Plan*, will also be prepared. The *Fire Management Plan* will become the working document for guiding fire management programs in Yosemite National Park.

STAY INVOLVED

Public participation in the planning process is critical. To receive a copy of the *Draft Yosemite Fire Management Plan/Environmental Impact Statement*, check the box on the coupon at the back of this *Planning Update* and mail or fax it to the park. Upon release in the fall, it will be available in hard copy or CD ROM and will also be posted on the park's planning web site (www.nps.gov/yose/planning).



Latest Developments

Merced River Plan

The 100-page *Merced Wild and Scenic River Comprehensive Management Plan* was released in late February. (To receive a copy, return the mailback form on the back of this *Planning Update*, and indicate that you would like to receive the *Merced River Plan*. It is also available on the park's planning web site.)

Yosemite Valley Plan

The last *Planning Update* announced a summer 2001 release for the *Yosemite Valley Plan* summary. That timeline has been postponed until later this year. An anticipated publication date will be announced in a future edition of the *Planning Update*.

Yosemite Falls Project

Design drawing approval for the Yosemite Falls Project must occur prior to proceeding with groundbreaking, originally anticipated for fall of 2001. As a result, groundbreaking will be rescheduled.

New Shuttle Bus Fleet

A new fleet of cleaner-burning diesel shuttle buses is on the road in Yosemite Valley. These vehicles will serve as an interim replacement fleet while alternative fuel buses are ordered and manufactured. This process is expected to take up to three years to complete.



Courtesy of Yosemite Concession Services

To view Yosemite
planning documents, visit
www.nps.gov/yose/planning



Photo by M. V. Hood

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